

Amendments to the Specification

Please replace paragraph [0010] with the rewritten paragraph provided below.

-- [0010] The present invention solves the current problems associated with removal of toxic wastes (e.g., toxic waste compounds, xenobiotics) from the environment, from biologic waste, and from mammals. The present invention identifies a novel protein that is a non-ABC transporter, referred to herein as RLIP76 and with an official human genome name of ralA binding protein1 also referred to herein as RalBP1, that efficiently detoxifies xenobiotics by a process that catalyzes ATP. Importantly, the protein is useful in the protection of mammals against xenobiotic accumulation and for the transport of xenobiotic waste in the environment often associated with industrial and chemical processing. RalBP1 ~~RLIP76~~ is also identified as a protein involved in drug resistance and in the protection against toxic by-products of metabolism, stress, and drugs or other organic chemicals. --

Please replace paragraph [0011] with the rewritten paragraph provided below.

-- [0011] Generally, and in one form, the present invention is a method of preparing a proteoliposome comprising the step of contacting a liposome with an effective portion of ~~RLIP76~~ RalBP1, to create a proteoliposome. The liposome is generally selected at least from the group consisting of lectin, glycolipid, phospholipid, and combinations thereof. In another aspect, the proteoliposome is added to one or more toxic compounds to reduce the concentration of toxic compounds, prevent the accumulation of toxic compounds, and protect against further contamination with one or more toxic compounds. Toxic compounds may be present in an organism, mammalian cell, transfected mammalian cell, bioreactor, soil, water, spill, process waste stream, manufacturing waste chemical waste, laboratory waste, hospital waste, and combinations thereof, to which the proteoliposome is then added. --

Please replace paragraph [0012] with the rewritten paragraph provided below.

-- [0012] In another form, the present invention is a proteoliposomal composition comprising a liposome and an effective portion of RalBP1 ~~RLIP76~~. The proteoliposome is used to reduce the concentration of toxic compounds and may further comprise at least 4-hydroxynonenal, leukotriene, polychlorinated biphenyls, glutathione, and combinations thereof. The effective portion of RalBP1 ~~RLIP76~~ is dependent on ATP for optimal activity. As discussed, the proteoliposomal composition is generally used for the treatment of toxic compound exposure, is capable of being transfected into a mammalian cell, and is capable of having antibodies generated against it. The composition may be applied or administered to an organism in need thereof by injection, dermal delivery, infusion, ingestion, and combinations thereof and capable of producing the desired effects. --

Please replace paragraph [0013] with the rewritten paragraph provided below.

-- [0013] In yet another form, the present invention is a method of reducing the effects of ionizing radiation comprising the step of adding a proteoliposome to a material with ionizing radiation, wherein the proteoliposome is a liposome and an effective portion of RalBP1 ~~RLIP76~~. Alternatively, the proteoliposome may be added before the ionizing radiation. Ionizing radiation may include x-ray radiation, gamma radiation, ultraviolet radiation, thermal radiation, nuclear radiation, and combinations thereof. --

Please replace paragraph [0014] with the rewritten paragraph provided below.

-- [0014] Another form of the present invention is a kit prepared for using the proteoliposomal composition described above comprising an effective dose of a proteoliposome, wherein the proteoliposome is a liposome and an effective portion of RalBP1 ~~RLIP76~~ and an instructional pamphlet. The kit is generally used to reduce the concentration of toxic compounds and their by-products and to enhance resistance to toxic compounds. --

Please replace paragraph [0015] with the rewritten paragraph provided below.

-- [0015] The benefits of RalBP1 ~~RLIP76~~ include the environmental, chemical and biologic protection against toxic compound and xenobiotic. RalBP1 ~~RLIP76~~ is critical in the transport of toxic compounds and xenobiotics and for enhancing resistance to drugs/chemicals and their toxic by-products (e.g., chemotherapy and radiation therapy). As used herein, toxic compounds arise as by-products of chemical and manufacturing processes (e.g., waste products), metabolism, pathologic conditions, stress, radiation, and drugs/chemicals, as examples. --

Please replace paragraph [0024] with the rewritten paragraph provided below.

-- [0024] As used herein, "an effective portion of RalBP1 or RLIP76," is any combination of proteolytic peptide products of RalBP1 or RLIP76 that, when combined, promotes the transport or prevents the accumulation of toxic organic compounds and/or enhances resistance to the toxic compounds. The effective portion may be a recombinant RalBP1 ~~RLIP76~~. --

Please replace paragraph [0088] with the rewritten paragraph provided below.

-- [0088] Thus, RLIP76 (RalBP1) displays distinct transport properties as a nonselective transporter of neutral and charged compounds, is involved in multidrug resistance, and plays a role in modulating cellular signaling that affects cell proliferation and cell death. As a proteoliposome, RalBP1 ~~RLIP76~~ may be provided to a mammal to protect against xenobiotic toxicity. Similarly, transfection of cells with an effective portion of RalBP1 ~~RLIP76~~ that enables transporter activity will promote xenobiotic protection, including protection from environmental or other chemicals (e.g., stress-induced, drug delivered, physiologically induced). Protection includes the treatment, inhibition, reduction, or prevention of accumulation in one or more cells of any chemical, that, when degraded, has the potential to damage these cells. This protection may be for environmental purposes, chemical procedures, or for mammals in need thereof. --

Please replace paragraph [0089] with the rewritten paragraph provided below.

-- [0089] The present invention is also a method of reducing the effects of ionizing radiation on one or more cells in an organism comprising the step of contacting the organism with a liposome further comprising RalBP1 ~~RLIP76~~ or an effective portion of RalBP1 ~~RLIP76~~.

Please replace paragraph [0090] with the rewritten paragraph provided below.

-- [0090] Still another form of the present invention is a method of enhancing the export of toxic compounds from mammalian cells comprising the step of contacting one or more mammalian cells with a liposome further comprising RalBP1 ~~RLIP76~~ or an effective portion of RalBP1 ~~RLIP76~~. --

Please replace paragraph [0091] with the rewritten paragraph provided below.

-- [0091] The present invention is also a method of transfecting mammalian cells to enhance the transport of toxic compounds comprising the step of contacting the organism with a liposome further comprising RalBP1 ~~RLIP76~~ or an effective portion of RalBP1 ~~RLIP76~~. --

Please replace paragraph [0092] with the rewritten paragraph provided below.

-- [0092] Another form of the present invention is a method of transfecting mammalian cells to enhance the resistance to ionizing radiation comprising the step of contacting one or more mammalian cells with a liposome further comprising RalBP1 ~~RLIP76~~ or an effective portion of RalBP1 ~~RLIP76~~. --

Please replace paragraph [0093] with the rewritten paragraph provided below.

-- [0093] In still another form, the present invention is a method of enriching mammalian cells to enhance their resistance to toxic compounds (including ionizing radiation) comprising the following step of contacting the organism with a liposome further comprising RalBP1 ~~RLIP76~~ or an effective portion of RalBP1 ~~RLIP76~~. --

Please replace paragraph [0094] with the rewritten paragraph provided below.

-- [0094] In addition, the present invention is a proteoliposomal composition for the treatment of toxic compound exposure comprising a liposome further comprising RalBP1 ~~RLIP76~~ or an effective portion of RalBP1 ~~RLIP76~~ and a chemotherapeutic agent. Another form of the present invention is a proteoliposomal composition for the treatment of toxic compound exposure comprising a liposome further comprising RalBP1 ~~RLIP76~~ or an effective portion of RalBP1 ~~RLIP76~~ and an effective dose of radiation therapy. --

Please replace paragraph [0095] with the rewritten paragraph provided below.

-- [0095] In yet another form, the present invention is a protein composition that protects one or more cells against the harmful accumulation of toxic compounds comprising RalBP1 ~~RLIP76~~ or an effective portion of RalBP1 ~~RLIP76~~ and a ligand to RalBP1 ~~RLIP76~~ that enhances transport activity of RalBP1 ~~RLIP76~~. --

Please replace paragraph [0096] with the rewritten paragraph provided below.

-- [0096] The present invention also embodies a kit for protecting one or more cells in an organism from the accumulation of one or more toxic compounds comprising an effective dose of a liposome further comprising RalBP1 ~~RLIP76~~ or an effective portion of RalBP1 ~~RLIP76~~ and an instructional pamphlet. --

Please replace paragraph [0097] with the rewritten paragraph provided below.

-- [0097] The present invention also includes a method of enhancing the resistance of one or more mammalian cells to toxic compounds comprising the step of contacting one or more mammalian cells with a liposome further comprising RalBP1 ~~RLIP76~~ or an effective portion of RalBP1 ~~RLIP76~~. --